



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference BIE006307/MR	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/B 02/00740	International filing date (day/month/year) 09.01.2002	Priority date (day/month/year) 09.01.2002
International Patent Classification (IPC) or both national classification and IPC H04L12/24		
Applicant TELEFONAKTIEBOLAGET L M ERICSSON		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 23.07.2003	Date of completion of this report 24.03.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Paven, A Telephone No. +31 70 340-4289 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No.

PCT/IB 02/00740

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-11 received on 13.02.2004 with letter of 10.02.2004

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-11
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

The following document (D) is referred to in this communication:

D1: HEGERING H-G ET AL: 'DESCRIBING AN SOI NETWORK CONFIGURATION - PROBLEMS AND POSSIBLE SOLUTIONS -', COMPUTER COMMUNICATION TECHNOLOGIES FOR THE 90'S. TEL AVIV, OCT. 30 - NOV. 3, 1988, PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON COMPUTER COMMUNICATION, AMSTERDAM, ELSEVIER, NL, VOL. CONF. 9, PAGE(S) 288-293

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The subject matter of claim 1 does not meet the requirement of inventive step, Article 33(3), for the following reasons:
 - 1.1. D1 discloses a method for managing a configuration of a network in a management center (page 288, col.2, lines 20-27), said network having a plurality of target objects, characterized in that it comprises:
elaborating a model of the network to be managed (page 289, col.2, lines 31-39);
identifying a plurality of target objects to be configured in the network (page 292, col.2, lines 37-38);
validating the changes to be made upon configuring of said plurality of target objects (page 292, col.2, lines 51-59); and, if all changes have been validated:
finding a sequence of target routers associated to said objects (page 292, col.2, lines 61-64 -page 293,- col.1, lines 1-4);
configuring each of said target objects (page 293, col.1, lines 5-11).

According to D1, an **OSI-related and private object** is a **real network object** and could also be "an object for switching" (see p.292, col.2, lines 23-24), while an **OSI object** is the **model representation** (used in the Layered Attributed Graph-LAG-of D1) of an OSI-related and private object. An OSI object has the attributes of timer value and routing information (see p.292, col.1, lines 41-42). In this context, in combination with the figure on pg.292 revealing packet switched data networks, it is considered that D1 also discloses routers.

The OSI-related and private objects are associated to OSI objects (mapping, see p.292, col.2, lines 37-41).

It is additionally noted that, upon requesting and validating an attribute change (a timer value in the example of D1, see p.292, col.2, line 46) in an OSI object, all affected OSI-related objects have to be changed (configured), see p.293, col.1, lines 1-5. Therefore, the step of finding a sequence of target routers associated with said target objects is also disclosed.

- 1.2 The differences between the subject matter of claim 1 and this known method is therefore that the connectivity is continuous.
- 1.3 The technical problem is to maintain the communication with the management center for the purpose of configuring said target routers.
- 1.4 It is however obvious to the skilled person to ensure continuous connectivity to the configured objects. As a consequence, claim 1 does not meet the requirement of inventive step, Article 33(3).
2. Claim 7 corresponds to claim 1 in apparatus terms and the same reasoning applies. Hence, claim 7 does not meet the requirement of inventive step, Article 33(3).

CLAIMS

1. A method for managing configuration of a network in a management centre (14), said network having a plurality of target objects, characterised in that it comprises:
- 5 elaborating a model (12) of the network to be managed;
identifying (32) a plurality of target objects to be configured in the network;
validating (32) the changes to be made upon configuration of said plurality of target objects;
- 10 and, if all changes have been validated:
finding (34) a sequence of target routers associated with said target objects that provides continuous connectivity to said management centre (14);
and
- 15 configuring (36) each of said target routers.
2. A method according to claim 1, characterised in that said model is based on the CIM (Common Information Model) schema.
3. A method according to claim 1 or 2, characterised in that said identification step (32) includes identifying direct target objects and indirect target objects.
- 20 4. A method according to claim 1, 2 or 3, characterised in that said validation step (32) includes checking the compliance of the changes to be made upon configuration with a predetermined set of rules.
5. A method according to any one of the preceding claims, wherein
- 25 said network is an IP based mobile access network.
6. A computer program product, loadable into a computer, characterised in that it comprises software code portions for implementing the steps of a method according to any one of the preceding claims when said product is run on a computer.
- 30 7. An apparatus for managing configuration of a network, said apparatus being located in a management centre (14), said network having a plurality of target objects, characterised in that it comprises:

means for elaborating a model (12) of the network to be managed;
means for identifying a plurality of target objects to be configured in
the network;

5 means for validating the changes to be made upon configuration of
said plurality of target objects;

means for finding a sequence of target routers associated with said
target objects that provides continuous connectivity to said management centre
(14); and

means for configuring each of said target routers.

10 8. An apparatus according to claim 7, characterised in that said
model is based on the CIM (Common Information Model) schema.

9. An apparatus according to claim 7 or 8, characterised in that said
identification means are adapted to identify direct target objects and indirect
target objects.

15 10. An apparatus according to claim 7, 8 or 9, characterised in that
said validation means are adapted to check the compliance of the changes to
be made upon configuration with a predetermined set of rules.

11. An apparatus according to any one of claims 7 to 10, wherein
said network is an IP based mobile access network.